

Remarks

Favorable reconsideration of this application is requested in view of the following remarks. For the reasons set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references.

The Office Action dated February 21, 2006, indicated that the drawings are objected to; the claims are objected to; claims 1-10 stand rejected under 35 U.S.C. §112(2) for alleged nonconformance to current U.S. practice; claims 1, 3, 5 and 9 stand rejected under 35 U.S.C. §103(a) over Pan *et al.* (U.S. Pat. 5,834,358) in view of Ajuria *et al.* (U.S. Pat. 5,837,612); claims 2, 6 and 8 stand rejected under 35 U.S.C. §103(a) over Pan in view of Ajuria and further in view of Peterson *et al.* (U.S. Pat. 6,545,299); claims 4 and 10 stand rejected under 35 U.S.C. §103(a) over Pan in view of Ajuria and further in view of Lam (U.S. Pat. 6,413,828); and claim 7 stands rejected under 35 U.S.C. §103(a) over Pan in view of Ajuria and Peterson, and further in view of Lam.

With respect to the objection to the drawings, Applicant has amended FIG. 3 to reflect an upper side 15 in a manner commensurate with the Examiner's request and the discussion in the Specification. Applicant requests that the objection to the drawings be removed.

With respect to the objection to the claims for the informality recognized by the Examiner, Applicant has amended claim 1 to correct the informality by changing "the silicon of the silicon body" to --the surface of the silicon body-- as consistent with claim 1 as submitted. Applicant appreciates the Examiner's attention to the claim language.

Applicant respectfully traverses the Section 112(2) rejection because the rejection is improperly based upon an alleged failure "to conform with current U.S. practice" and because the scope of the claims would be readily apparent to one of skill in the art. Regarding the basis of the rejection, the Office Action fails to cite any portion of the M.P.E.P. or other relevant law that identifies "current U.S. practice" as any grounds upon which to reject claims. It is further unclear to the Applicant as to what is meant by current U.S. practice.

Regarding the scope of the claims, the only discussion of the claimed limitations in the Office Action improperly asserts that it is unclear as to whether the language "a thicker layer of silicon oxide" discusses the thicker layer as formed on an auxiliary layer, or under

the auxiliary layer. In citing this portion of claim 1, the Office Action has left out important (and clearly identifying) limitations. Specifically, claim 1 further recites “wherein a surface of a silicon body is provided with an auxiliary layer of a material on which, during an oxidation treatment, a thicker layer of silicon oxide is formed.” Specifically, this portion of the claims discusses “an auxiliary layer of material *on which* ... a thicker layer of silicon oxide is formed” (emphasis added). The language “during an oxidation treatment” is set aside by commas, emphasizing that the thicker layer of silicon oxide is formed on the auxiliary layer. Applicant cannot ascertain any grammatical or other interpretation of these claim limitations that is in the contrary.

In view of the above, Applicant submits that the Section 112(2) rejections are improper and should be removed. Notwithstanding the above, certain amendments have been made to the claims in a manner that may facilitate prosecution of the application; such amendments are consistent with the original intent of the claims and are not necessary nor are made to overcome the Section 103 rejections.

Applicant respectfully traverses all of the Section 103 rejections, each of which relies upon a combination of Ajuria with Pan, because the combination does not teach or suggest all of the claimed limitations, and because modification of the primary Pan reference to arrive at the claimed limitations would remove its purpose reference directed to the oxidation of a doped “auxiliary layer” and is thus unmotivated (*see, e.g., M.P.E.P.* § 2143.01, citing *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 Fed. Cir. 1984).

The portions of the primary Pan reference cited in the Office Action do not correspond to claimed limitations of the instant invention, including those directed to an (non-doped) auxiliary layer and silicon body, wherein during an oxidation treatment, a thicker layer of silicon oxide is formed on the auxiliary layer. For example, while page 4 of the Office Action discusses a thicker layer of silicon oxide 44, this silicon oxide layer is formed on a surface 43 of a silicon body 42, not on the polishing material 46 asserted as the “auxiliary layer” (*see, e.g., FIG. 9 and discussion at column 4, lines 9-19*). The polishing material 46 appears to be formed over the silicon oxide 44 and correspondingly after the silicon oxide is formed. In this regard, the silicon oxide 44 is not, as the Office Action suggests, formed on the polishing material 46 (asserted at the “auxiliary layer”). Moreover, the embodiments and claims in the Pan reference limit such polishing material

46 to a material that is doped to achieve a desirable polishing rate and, accordingly, oxidation rate. In this regard, the cited portions of the Pan reference do not correspond to the claimed limitations as suggested.

In addition to the above, as acknowledged in the Office Action, the Pan reference does not teach or suggest the claimed (non-doped) auxiliary layer including germanium. Applicant submits that the proposed modification of the Pan reference to include a germanium silicon material still fails to teach or suggest all of the claimed limitations because the germanium silicon material would necessarily be doped, which is contrary to and otherwise teaches away from the current claim limitations. For example, as discussed in paragraphs 4 and 5 of the instant application, the Pan reference's "use of the comparatively heavily doped poly-crystalline silicon as the material for the auxiliary layer has the drawback that, during the oxidation treatment, atoms of the dopant ... may issue from the auxiliary layer and find their way into the grooves in the silicon body." As paragraph 6 in the instant application goes on to state, "as there is no dopant in the auxiliary layer [of the instant invention], there is no risk that undesired atoms of a dopant are bound in the interface between silicon oxide and the walls of the grooves." In this regard, the object of the Pan reference that is directed to the use of a dopant to facilitate a polishing or auxiliary layer clearly teaches away from the claimed limitations of the instant invention; combining this object with a germanium-containing layer (or any other layer) therefore still fails to teach or suggest the claimed limitations.

In view of the above, the Section 103 rejections fail because the cited thicker layer of silicon oxide 44 is not formed on an auxiliary layer as claimed, and because the doped polishing layer 46 does not correspond to the claimed auxiliary layer, whether or not the polishing layer includes germanium. Therefore, all of the claim rejections, each of which relies upon these non-corresponding portions of the cited references, should be removed.

In addition to the above, the Section 103 rejection is also improper because, in order to modify the polishing layer 46 of the primary Pan reference to arrive at the claimed auxiliary layer, the Pan reference's object directed to doping of the polishing layer 46 would be removed. Specifically, the claimed auxiliary layer of the instant invention is not doped. As supported in the specification and claims of the instant

application, claim 1 has been amended to more specifically point out this characteristic in that the "layer comprising silicon and germanium ... applied as an auxiliary layer" does not comprise a dopant. Modifying the Pan reference to include such a non-doped layer would frustrate Pan's purpose of providing a doped polishing layer 46 and is thus unmotivated (*see, e.g., In re Gordon*, cited above). In this regard, the Section 103 rejections of all of the claims are unmotivated and should be removed.

In view of the above, the remaining Section 103 rejections, each of which relies upon the above combination of Pan and Ajuria, and many of which involve the introduction of yet additional references, are not discussed further. However, Applicant respectfully traverses all of these rejections for failing to correspond to the claimed limitations (as discussed above and/or otherwise), and because there is no motivation to modify the primary Pan reference as suggested. Should any of the remaining rejections be maintained, Applicant reserves the right to respond to these rejections and to their impropriety.

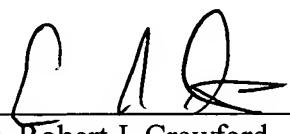
New claim 11 is patentable over the cited references because it includes limitations directed to an auxiliary layer, among others, that is not taught or suggested by the cited references as discussed above. Support for claim 11 may be found, for example, in the original claims and in the Specification at paragraphs 6 and 20.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the senior patent counsel overseeing the application file, Peter Zawilski, of Philips Corporation at (408) 474-9063.

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In the Drawings:

Attached please find one replacement sheet of Drawings, in which FIG. 3 has been amended. Also attached is one annotated sheet, showing Applicant's amendments (shown in red ink) within the replacement sheet. The minor amendments are supported by the specification. No structural changes have been made to the drawings, and no new matter has been added. The changes in the drawings are as follows:

FIG. 3: Reference no. '15' added as identified at page 4, line 33
 of the specification.

Attachments: One replacement drawing sheet; and one annotated sheet.

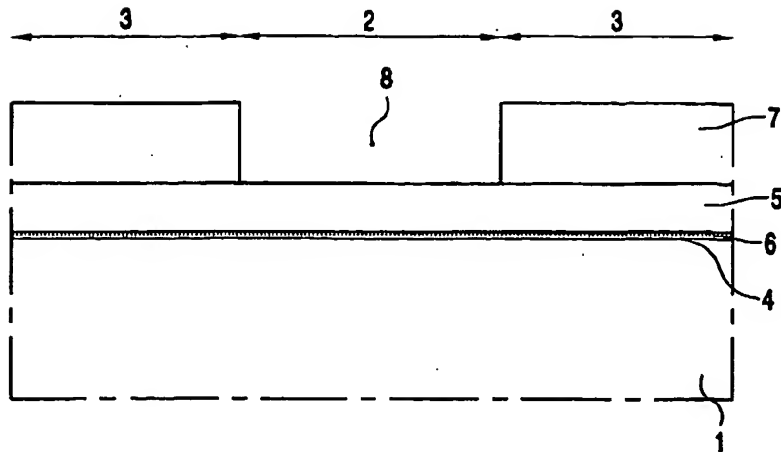


FIG. 1

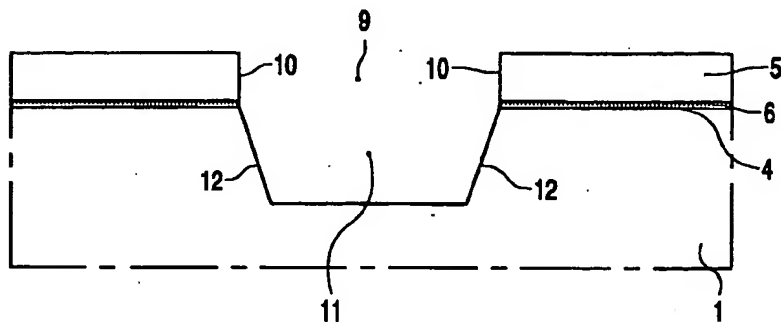


FIG. 2

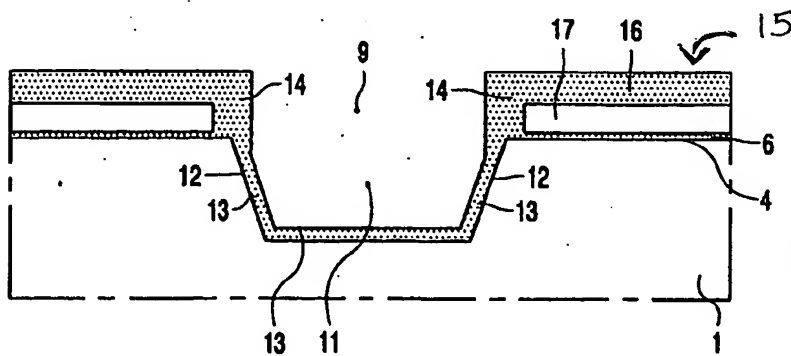


FIG. 3

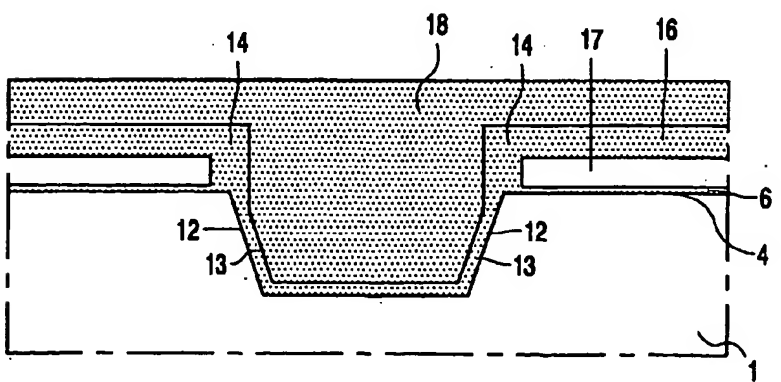


FIG. 4